

**Amendments to the Specification:**

*Please add the following paragraphs at page 9, line 3 before the heading "BRIEF DESCRIPTION OF THE DRAWINGS":*

According to another broad aspect of the present invention, a method for transmission of a stream of data between first and second communications devices of a transmission system is provided. The data is segmented into packets prior to transmission thereof. Each of the packets comprises a header of a given size and a payload. The method comprises the steps of: (a) at the first communications device, in the header in the stream of data, examining a predetermined data element and evaluating information therein to determine whether the information is available to the first and second communication devices, independently from information in other headers in the stream of data; (b) if the information is available to the first and second communication devices, reducing the given size of the header prior to the transmission of packets by eliminating the predetermined data element therefrom to form a reduced header; (c) transmitting the reduced header from the first of the two communications devices to the second communications device; and (d) at the second communications device, restoring the given size of the header when the reduced header so transmitted has been received by the second of the two communications devices by reconstituting the predetermined data element thereto.

The reconstituting of the predetermined data element may be accomplished by the insertion into the reduced header of a bit having a value of zero. Error verification of the transmitted packet may be conducted only in relation to bits forming part of the reduced header. The error verification may be accomplished by encoding the reduced header with a header error check field. The error verification may be computed by way of a Hamming code.

All headers transmitted from the first communications device may be examined. The packets may be cells of a fixed length. The cells may be Asynchronous Transfer Mode (ATM) cells.

An additional data element may be eliminated from the header. The data element and the additional data element may comprise a Virtual Path Identifier (VPI) and a Virtual Channel Identifier (VCI). The reduced header may comprises a least significant portion of the VPI and a least significant portion of the VCI. The reconstituting of each predetermined data element may include adding a sufficient number of bits each having a value of zero to the portion of the VPI and the portion of the VCI.

The header, prior to the eliminating of predetermined data elements therefrom, may comprises a Generic Flow Control (GFC) field. The Generic Flow Control (GFC) field may be eliminated to further form the reduced header. The reconstituting of each predetermined data element may include adding a sufficient number of bits each having a value of zero to the reduced header to reconstitute the GFC field.

The header error check field of the header prior to the eliminating of predetermined data elements therefrom and of the reduced header may be a Header Error Check (HEC) field according to the Asynchronous Transfer Mode (ATM) protocol. The header error check field of the header prior to the eliminating of predetermined data elements therefrom and of the reduced header may be a Header Error Check (HEC) field according to the Asynchronous Transfer Mode (ATM) protocol and in the case of the reduced headers may be encoded on fewer than 8 bits. The Header Error Check (HEC) field of the reduced headers may be encoded on 5 bits.

Each header to which the step of reducing is applied may be identified on instructions received by the first communications device. The predetermined data element may be identified for elimination on instructions received by the first communications device. The instructions may be furnished by the second communications device. The instructions may be furnished by a network management device. The instructions may be furnished by a network management device.

The additional data element may relate to information selected from one of: a payload type; a cell loss priority; and a header error check. The stream of data may be examined for a header in on a periodic basis. The first and second communication

devices may negotiate before the first communication device examines the stream of data.

According to yet another broad aspect of the present invention, an apparatus for transmission of a stream of data to a communications device of a transmission system is provided. The data is segmented into packets prior to transmission thereof. Each of the packets comprises a header of a given size and a payload. The apparatus comprises a processor which: examines the header in the stream of data; examines a predetermined data element therein; evaluates information in the header to determine whether the information is available to the apparatus and the communication device, independently from information in other headers in the stream of data; if the information is available to the apparatus and the communication device, causes the reduction the given size of the header prior to the transmission of packets by eliminating the predetermined data element therefrom to form a reduced header; and controls transmitting the reduced header from apparatus.

According to a further broad aspect of the present invention, an apparatus for reception of a stream of data transmitted by a communications device in a transmission system is provided. The data is segmented into packets prior to transmission thereof. Each of the packets comprises a header of a given size and a payload. The given size of the header having been reduced by the communications device prior to the transmission of packets by evaluating information in the header to determine whether the information is available to the communication device and the apparatus independently from information in other headers in the stream of data, and if the information is available to the communications device and the apparatus, causing the reduction of the given size of the header prior to the transmission of packets by eliminating the information therefrom to form a reduced header. The apparatus comprises: a processor which restores the given size of the header when the reduced header so transmitted has been received by the apparatus by reconstituting the eliminated information.